

PAG. 932 N 20

$$440 \text{ Hz} \cdot \underbrace{\sqrt[12]{2^7}}_{2^{\frac{7}{12}}} = 659 \text{ Hz}$$

$$\begin{aligned} x &= \log_a b \\ b &= a^x \\ a^x &= a^{\log_a b} = b \end{aligned}$$

N 21

$$L = 100 \text{ dB}$$

$I = ?$

$$L = 10 \log_{10} \frac{I}{I_0}$$

$$I_0 = 10^{-12} \frac{\text{W}}{\text{m}^2}$$

$$100 = 10 \log_{10} \frac{I}{I_0}$$

$$10^{10} = 10 \log_{10} \frac{I}{I_0}$$

$$10^{10} = \frac{I}{I_0}$$

$$10 = \log_{10} \frac{I}{I_0}$$

$$I = 10^{10} \cdot 10^{-12} \frac{\text{W}}{\text{m}^2} = 10 \cdot 10^2 \frac{\text{W}}{\text{m}^2}$$

$$a^{\log_a x} = x$$